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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,204	09/16/2003	Suzuko Fukao	CFA00009US	1377

34904 7590 06/11/2007

CANON U.S.A. INC. INTELLECTUAL PROPERTY DIVISION
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EXAMINER	
LAY, MICHELLE K	
ART UNIT	**PAPER NUMBER**
2628	

MAIL DATE	DELIVERY MODE
06/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/664,204	FUKAO ET AL.	
	Examiner	Art Unit	
	Michelle K. Lay	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 7-14-06
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims **1-9** and **12-19** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In regards to claims 1 and 12, recites, "*... in the event that said first color values does **not** correspond to achromatic color due to said smoothing, adjust the first color values to provide second color values corresponding to the achromatic color in said color space.*" [emphasis added] However referring to Fig. 5 and paragraph [0034] of Applicant's disclosure, it is determined in step s102 whether the RGB value obtained after smoothing corresponds to achromatic color. If this RGB value ***is*** achromatic, the flow proceeds to step s103 where adjustment is made. However, according to Fig. 5, if this RGB value ***is not*** achromatic, it is directly stored in the color correction table (s104), which is not in correspondence with the limitations of claims 1 and 12.

Additionally, claims 1 and 12 recite, "*... smoothing the color values to provide first color values corresponding to **achromatic** color in said color space.*" [emphasis added] However, according to Fig. 5 and paragraph [0034] of Applicant's disclosure, the smoothing process of step s101, performs smoothing for the RGB values read out

by the smoothing unit (15). This is down by using Gaussian filtering or by averaging adjacent ***RGB*** values for each of the R, G, and B color axes. As with process s101, the smoothing is performed with reference to ***surrounding*** colors, not the achromatic color as cited in claims 1 and 12. Therefore, it is unclear as to which color is in the smoothing process.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims **1-9** and **12-19** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites, "... smoothing the color values to provide first color values corresponding to ***achromatic*** color in said color space ..." However, Fig. 5 and [0034] of Applicant's disclosure teaches smoothing the color values to provide values corresponding to the ***surrounding*** colors in the color space and not the achromatic. This would make sense "in the event that said first color values does not correspond to achromatic color due to said smoothing, adjusting the first color values to provide second color values corresponding to the achromatic color in said color space." As claim 1 is currently written, smoothing the first color values corresponding to colors that are already achromatic would not require questioning if the first color values do not correspond to achromatic color due to smoothing because they already smoothed due to achromatic colors in the color space.

Due to the severity of the 1st and 2nd paragraph rejections, Examiner is rejecting the claims based on the definition in Applicant's disclosure.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims **12-19** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims **12-19** fails to recite the computer program product embodied in computer-readable media. Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not capable of causing functional change in the computer. Warmerdam, 33 F.3d at 1361, 31 USPQ 2nd at 1760. Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized.

Information Disclosure Statement

The information disclosure statement(s) (IDS) submitted on 06/01/2007 is being considered by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims **1-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanamori et al. (4,929,978). Do to the severity of the 112 1st and 2nd paragraph rejections made above, Examiner is rejecting the claims based on the definition in Applicant's disclosure.

In regards to claim **1**, Kanamori teaches a color correction method/system that prepares a table memory that relates a density color value to a D-space value. As shown in Fig. 5, the D set of color density values is not uniformly distributed throughout the D space, but is confined to a restricted region surrounding the achromatic color axis, i.e., a line connecting the maximum white color value W to the maximum black color value BK [col. 8 lines 1-5]. A shown in Fig. 6, mapping from the X space to the D space, it will be apparent that some of the D values will corresponding directly to specific ones of the D values in this mapping operation, or will be close to correspondence, however many other D values, when mapped into the D space, will not correspond to any of the D space values. This is the case for D space values which are outside the D value boundary (18). It is also the case for where a Ď value is intermediate between several D space values, as indicated [col. 8 lines 17-39]. Thus, for each of the possible color density values, the closest one of the Ď values is searched for and determined [col. 8

lines 45-50]. A relational table is obtained which relates respective ones of the color density values of the D space to corresponding ones of the D~ values (said ***receiving color values in color correction table***) [col. 8 lines 54-58]. After the relational table is created, smooth of the table values is executed (said ***smoothing***) [col. 9 lines 10-11]. A table is then drawn up (said ***storing second values in table***) [col. 9 lines 15-25].

In regards to claim **2**, as shown in Fig. 5, the D set of color density values is not uniformly distributed throughout the D space, but is confined to a restricted region surrounding the achromatic color axis [col. 7 line 66 – col. 8 line 5].

In regards to claim **3**, Kanamori teaches X color space is mapped to D color space, where the color density values are surrounding the achromatic color axis [col. 8 lines 20-21].

In regards to claim **4-6**, Kanamori shows in Fig. 5, the D set of color density values is not uniformly distributed throughout the D space, but is confined to a restricted region surrounding the achromatic color axis, i.e., a line connecting the maximum white color value W to the maximum black color value BK [col. 8 lines 1-5]. A shown in Fig. 6, mapping from the X space to the D space, it will be apparent that some of the D values will corresponding directly to specific ones of the D values in this mapping operation, or will be close to correspondence, however many other D values, when mapped into the D space, will not correspond to any of the D space values. This is the case for D space

values which are outside the D value boundary (18). It is also the case for where a Ď value is intermediate between several D space values, as indicated [col. 8 lines 17-39]. Thus, for each of the possible color density values, the closest one of the Ď values is searched for and determined [col. 8 lines 45-50]. Thus after the relational table is created, smooth of the table values is executed (said ***smoothing***) [col. 9 lines 10-11]. The values outside the boundary (i.e. off of the achromatic axis) are smoothed for a more gradual change [col. 9 lines 10-15]. Thus, the limit value is the D value boundary (18). Additionally the method/system of Kanamori teaches two separate sets of color correction values can be used where for example, one of the tables of the color correction table memory emphasizes highlight region and the other can provide optimum correction for darker regions (said ***other regions, color regions***) [col. 10 lines 47-51].

In regards to claims **8** and **9**, the system of Kanamori is controlled by a system controller, i.e., a suitably programmed digital microprocessor. Thus it would be required by executable instructions to aid in controlling the microprocessor. Furthermore,

In regards to claim **10**, claim 10 recites the same limitations as claim 1. Therefore, the same rationale used for claim 1 is applied. Furthermore, Kanamori teaches a smoothing processing section (47) [Fig. 8; col. 12 lines 31-35] and a color correction unit [Fig. 7; col. 10 lines 7-55] within the system of Kanamori.

In regards to claim **11**, as illustrated in Fig. 12, the system of Kanamori includes a LCD (105).

In regards to claim **12**, claim 12 recites the same limitations as claim 1. Therefore, the same rationale used for claim 1 is applied. Additionally, the system of Kanamori is controlled by a system controller, i.e., a suitably programmed digital microprocessor [col. 10 line 55]. Thus it would be required by executable instructions to aid in controlling the microprocessor.

In regards to claim **13**, claim 13 recites the same limitations as claims 2 and 12. Therefore, the same rationale used for claims 2 and 12 is applied.

In regards to claim **14**, claim 13 recites the same limitations as claims 3 and 12. Therefore, the same rationale used for claims 3 and 12 is applied.

In regards to claim **15**, claim 15 recites the same limitations as claims 4 and 12. Therefore, the same rationale used for claims 4 and 12 is applied.

In regards to claim **16**, claim 16 recites the same limitations as claims 5 and 12. Therefore, the same rationale used for claims 5 and 12 is applied.

In regards to claim **17**, claim 17 recites the same limitations as claims 6 and 12. Therefore, the same rationale used for claims 6 and 12 is applied.

In regards to claim **18**, claim 18 recites the same limitations as claims 7 and 12. Therefore, the same rationale used for claims 7 and 12 is applied.

In regards to claim **19**, claim 19 recites the same limitations as claims 8 and 12. Therefore, the same rationale used for claims 8 and 12 is applied.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kuno et al. (2001/0009463 A1)

Hirota (5,357,353)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle K. Lay whose telephone number is (571) 272-7661. The examiner can normally be reached on Monday-Friday 7:30a-5p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee M. Tung can be reached on (571) 272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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